

glochidia. In assigning an age to these shells it is quite sure that the *tetralasmus* discharges its glochidia in March and early April, so that when picked up on May 25, these shells were just about fourteen months old, from the date of discharge from their mother's gills.

In the case of the *texasensis* (which spawns somewhat later) it is possible that these were dropped by fish of which, at least six species) obtained access to the pit on May 7, 1916 (on which date an overflow occurred), thus making about thirteen months. At any rate the maximum age of either species is fourteen months from their mother's ovisacs. One of the *U. tetralasmus* is shown of natural size in Pl. VII, fig. 4.

Another observation concerning pond mussels might here prove of interest. A large pond was cut into two by a railroad embankment, a culvert preserving the level and providing communication between the two. In the lower and larger pond a half-bushel of Yonkapiin (*Nelumbium luteum*) seed was sown. It was six years before these seed germinated. These plants, during the summer, cover the entire surface of the pond with their broad peltate leaves. In this pond the writer planted a colony of a dozen *Anodonta grandis*. Several years after, taking advantage of extreme low water, the writer made a careful survey of these twin ponds, with the result that hundreds of Anodons could be found in the upper pond, but not a single one was found in the lower pond. Either the shade killed the young shells, or else the glochidia-laden fish avoided the shade of the lotus plants and congregated in the upper pond (there are no *Nelumbii* in the upper pond). Is not this avoidance of shade a reason for the paucity of unios in the tropics?

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#### A NEW SOUTH AFRICAN NESOPUPA.

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BY H. A. PILSBRY.

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NESOPUPA FARQUHARI, n. sp.

Among Pupillidae sent by Mr. J. Farquhar there is a new species from Grahamstown which may be defined by comparison

with *Nesopupa griqualandica* (Melv. and Pons.).<sup>1</sup> The new form is ovate, of about the size of the other species, which it resembles in sculpture and in the lamellae of the parietal wall and columella. The two palatal plicae are subequal, the upper emerging to the lip, the lower one also long, reaching to the inner edge of the peristome. There is a very small nodule on the base of the columella. In *griqualandica* the lower palatal plica is short and very deeply immersed and there is a distinct though small basal plica within the base, in front of the lower palatal plica. In *griqualandica* there is a deep sulcus outside, over the upper palatal plica, and a flattening or short groove over the lower palatal; but in *farquhari* the sulcus is far less impressed except quite close to the lip. The color is reddish brown. Length 1.65, diam. 0.9 mm.

Mr. Burnup's figure 9, in Melvill and Ponsonby's Revision,<sup>2</sup> may perhaps represent this species, while their description in the same paper appears to comprise both *griqualandica* and *farquhari*, though chiefly relating to the former. Their pl. I, figs. 8 and 10 represent *griqualandica*. The new form is named in honor of one of the most successful South-African collectors. It will be figured in the Manual of Conchology.

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#### A NEW GUNDLACHIA FROM GUATEMALA.

BY BRYANT WALKER.

GUNDLACHIA HINKLEYI, n. sp., Pl. I, figs. 10-16; Pl. III, fig. 1.

Shell subovate, being much wider posteriorly, the anterior margin rather shortly rounded, the right margin nearly rectilinear, but somewhat diverging anteriorly, the left margin obliquely expanded and broadly rounded, anterior margin wider and much more curved than the posterior; apex very excentric, depressed and decidedly turned toward the right side, bluntly rounded, smooth except for a few concentric wrinkles; color a very pale corneous, nearly pure white; lines of growth rather strong and

<sup>1</sup> *Pupa griqualandica* M. and P., 1893; the specimens used being from Pretoria.

<sup>2</sup> Ann. Mag. N. H. (8), i, p. 76, pl. i, 1908.